CLAIMS

1. An isolated cDNA molecule that encodes a nuclear migration protein in human cells and is capable of complementing the *nudC* mutation of *A. nidulans*.

2. The cDNA molecule of claim 1, comprising the nucleotide sequence:

1 CTAGAGTGCA GAGCTCCGGG ACGTGGATCG GAGCCGGCGC GATGGGCGGA GAGCAGGAGG

61 AGGAGCGGTT CGACGGCATG TTGCTGGCCA TGGCTCAGCA GCACGAGGGC GGCGTGCAGG

121 AGCTTGTGAA CACCTTCTTC AGCTTCCTTC GACGCAAAAC AGACTTTTTC ATTGGAGGAG

181 AAGAAGGGAT GGCAGAGAAG CTTATCACAC AGACTTTCAG CCACCACAAT CAGCTGGCAC

241 AGAAGACCCG GCGGGAGAAG AGAGCCCGGC AGGAGGCCGA GCGGCGGGAG AAGGCGGAGC

301 GGGCGGCCAG ACTGGCCAAG GAAGCCAAGT CAGAGACCTC AGGGCCCCAG ATCAAGGAGC

361 TAACTGATGA AGAGGCAGAG AGGCTGCAGC TAGAGATTGA CCAGAAAAAG GATGCAGAGA

421 ATCATGAGGC CCAGCTCAAG AACGGCAGCC TTGACTCCCC AGGGAAGCAG GATACTGAGG

481 AAGATGAGGA GGAAGATGAG AAGGACAAAG GAAAACTGAA GCCCAACCTA GGCAACGGGG

541 CAGACCTGCC CAATTACCGC TGGACCCAGA CCCTGTCGGA GCTGGACCTG GCGGTCCCTT

601 TCTGTGTGAA CTTCCGGCTG AAAGGGAAGG ACATGGTGGT GGACATCCAG CGGCGGCACC

661 TCCGGGTGGG GCTCAAGGGG CAGCCAGCGA TCATTGATGG GGAGCTCTAC AATGAAGTGA

721 AGGTGGAGGA GAGCTCGTGG CTCATTGAGG ACGGCAAGGT GGTGACTGTG CATCTGGAGA

781 AGATCAATAA GATGGAGTGG TGGAGCCGCT TGGTGTCCAG TGACCCTGAG ATCAACACCA

841 AGAAGATTAA CCCTGAGAAT TCCAAGCTGT CAGACCTGGA CAGTGAGACT CGCAGCATGG

901 TGGAAAAGAT GATGTATGAC CAGCGACAGA AGTCCATGGG GCTGCCAACT TCAGACGAAC

961 AGAAGAAACA GGAGATTCTG AAGAAGTTCA TGGATCAACA TCCGGAGATG GATTTTTCCA

1021 AGGCTAAATT CAACTAGCCC CTGTTTTTTC CTCCCTGAAC TCTTGGGGCT GAGCTGCAAC

1081 CACCCAACTT TCTTTCCCAC TCTTCTCTGG GACTTGTGGG CCTCAGGGCT TGGGGCAGGC

1141 ATGGGACTGG CCCAGGCACA CAGGTCCCGG GGCATCAGGA GAAAGGCTGG GTCTTGGGAC

1201 CTTGTCCTCC CCAGTTGGCC TACTGTTACA CATTAAAACG ATTTGCCCAG CTCAAAAAAA

1261 AAAAAAAAAA AAAAAAAAAA A

3. Use of an antisense molecule complementary to a human nuclear migration gene to inhibit expression of the gene in malignant cells in humans.

4. The use of an antisense molecule of claim 3, wherein the malignant cells are bone marrow-derived cells from persons with acute lymphoblastic or myelogenous leukemia.

5. The use of the antisense molecule of claim 3, wherein the human nuclear migration gene is symbolized *HnudC*.

6. The use of the antisense molecule of claim 3, wherein the antisense molecule is a phosphorothioate oligonucliotide to *HnudC* mRNA.

7. Use of a labeled DNA or RNA probe capable of hybridizing to at least a portion of a human nuclear migration gene from a sample of a patient with a disease, to detect increased expression of the gene which would indicate the presence of an aggressive disease requiring intense therapy.

8. Use of ribozymes to inhibit the effects of a human nuclear migration gene on human cell proliferation by modulating production of HNUDC through interference with the mRNA produced by the gene.

9. The use of ribozymes of claim 8, wherein the human nuclear migration gene is *HnudC*.

10. Use of antibody directed to HNUDC quantitate HNUDC protein levels in malignant cells.

11. The use of claim 10, wherein malignant cells are selected from the group consisting of acute lymphoblastic and myelogenous leukemia cells.

12. The use of claim 10, wherein after quantitating the HNUDC protein levels, the levels are compared to standards to determine the clinical stage of the malignancy.

13. An expression vector comprising at least a portion of a human nuclear migration gene, and a suitable promoter.

14. The vector of claim 13, wherein the suitable promoter is a tissue specific promoter.

15. The vector of claim 12, wherein the expression is inducible.

16. An antibody to a fragment of a conserved sequence of the NUDC protein.

17. The antibody of claim 16, wherein the conserved amino acid sequence is MVEKMMYDOROK.

18. Use of an antibody to human NUDC to monitor expression of the NUDC protein in human cells.

19. Use of an antibody to human NUDC to detect patients with leukemia.

20. Use of an antibody to human NUDC in bone marrow to differentiate high risk from standard ALL patients.

21. An inhibitor of the DNA molecule as claimed in any one of claims 1 or 2, for use as a pharmaceutical.